

THINK SMARTER SOLAR



Enphase technology changes everything.



More power means lower energy bills

Traditional inverters operate at the level of the lowest-performing panel, so a little shade, dust or debris can have a huge effect on production—and your energy bill. Enphase Microinverters allow panels to operate independently, increasing performance even in the low light of morning, evening, or cloudy days.



Long-term reliability

Fourth-generation Enphase Microinverters are the result of a highly refined design and testing process pioneered by the industry leader in microinverter technology. With that comes the confidence to offer an industry-leading 25-year Limited Warranty.



The leader in microinverter technology brings you simpler, smarter solar. **The Enphase System** connects each solar panel to a microinverter and monitors them through intelligent, web-based software.

It's a system that allows:

- Each panel to operate independently
- Remote monitoring and troubleshooting
- Maximum design flexibility to fit any roof

The result is a significant improvement in energy production, reliability, and safety—and a faster return on your solar investment.



Faster return on your investment

With Enphase, your system is always running at maximum efficiency, giving you more power for your money. Rest assured knowing Enlighten monitoring software makes it easy for solar professionals to identify and resolve issues, maximizing system performance and delivering a faster return on your investment.



Safer to install and own

Traditional inverters utilize high-voltage DC wiring, which is dangerous when damaged or installed improperly. Enphase Microinverters use low-voltage AC wiring, significantly reducing the risks of fire and injury.

See the Difference Solar Makes With **MyEnlighten**



MyEnlighten is your online connection to system performance providing an **engaging, easy-to-use interface** that you can customize with your own photos and text. You can access MyEnlighten through your PC, tablet or smartphone and use it to keep track of your investment:

- Verify system health and performance at-a-glance
- View energy production by month, day, or hour
- Analyze performance against historical weather data
- Share system performance on Twitter or Facebook

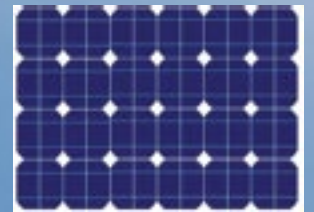
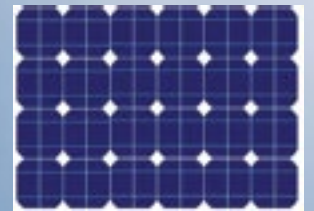
To learn more about
The Enphase System,
visit enphase.com/smartersolar

HERE'S HOW IT WORKS

The Enphase System consists of three advanced components that work together to make solar more productive, more reliable, and easier to install and own.

1 Enphase® Microinverters

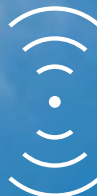
Installed beneath each solar panel, Enphase Microinverters maximize energy production and convert DC power into low-voltage AC electricity. They offer greater design flexibility to fit on different roof planes and multiple buildings.



Each solar panel has its own Enphase Microinverter.

2 Envoy® Communications Gateway

The Envoy acts as a messenger between your microinverters and Enlighten software, collecting energy production data over your home's electrical wiring and sending the data through your Internet router to Enphase's data centers.



3 Enlighten® Software

Solar professionals use Enlighten Software to remotely monitor, manage, and troubleshoot your system 24 hours a day from any PC, tablet, or smartphone. You can use MyEnlighten, a user-friendly version of the software, to keep track of energy production.



Ask your Enphase installer for a quote today.



The Enphase Envoy Communications Gateway™ is the networking hub for your solar array.

System owners can easily check the status of their solar system using the Envoy's LCD display, or they can get more detailed, per module information through Enlighten, Enphase's web-based monitoring and analysis software.

SMART

- Includes web-based monitoring & control
- Integrates with smart energy devices

SIMPLE

- Plug & play installation
- Automatic upgrades & diagnostics

RELIABLE

- 24/7 monitoring & analysis
- Advanced data management & storage



TECHNICAL CHARACTERISTICS

Interface	
Power Line Communications	Enphase proprietary
Local Area Network (LAN)	10/100 auto-sensing, auto-negotiating
Power Requirements	
AC supply	230Vac, 50Hz
Power consumption	2.5 watts typical, 7 watts maximum
Capacity	
Number of microinverters polled	Up to 500
Mechanical Data	
Dimensions (WxHxD)	222.5mm x 112mm x 43.2mm (8.8" x 4.4" x 1.7")
Weight	340g (12oz.)
Ambient temperature range	-40°C to +65°C (-40° to 149°F)
Cooling	Natural convection – no fans
Enclosure environmental rating	Indoor
Compliance	
Compliance	EN 60950-1, EN 55022 Class B, EN 55024, EN 50065-1, EN 50065-2-2, EN 61000-3-2, EN 61000-3-3

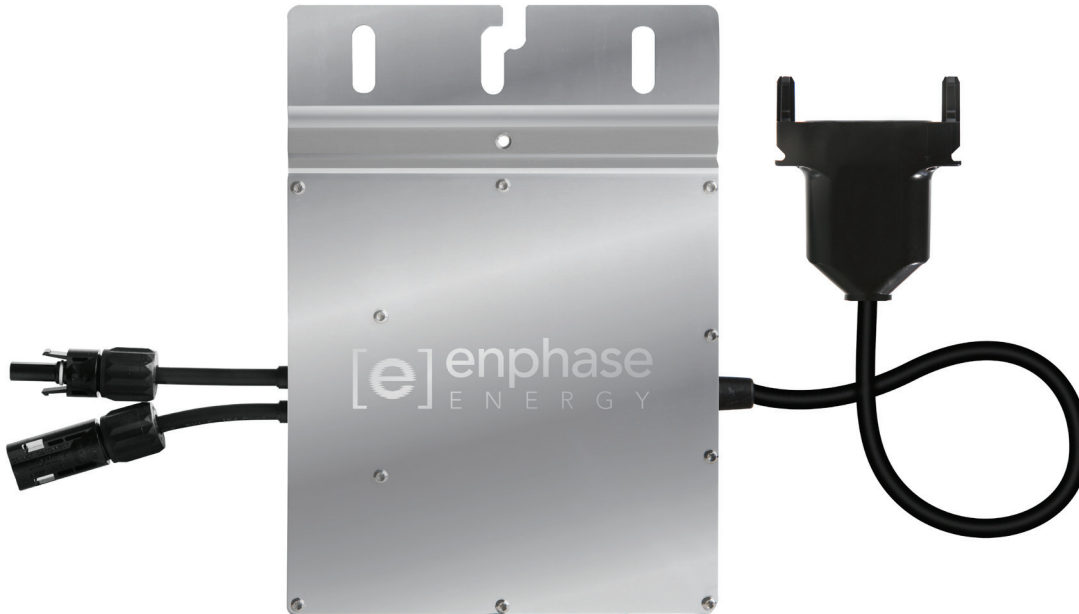
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Enphase® M250



The **Enphase® M250 Microinverter** delivers increased energy harvest and reduces design and installation complexity with its all-AC approach. With the M250, the DC circuit is isolated and insulated from ground, so **no Ground Electrode Conductor (GEC) is required for the microinverter**. This further simplifies installation, enhances safety, and saves on labor and materials costs.

The Enphase M250 integrates seamlessly with the Engage® Cable, the Envoy® Communications Gateway™, and Enlighten®, Enphase's monitoring and analysis software.

PRODUCTIVE

- Optimized for higher-power modules
- Maximizes energy production
- Minimizes impact of shading, dust, and debris

SIMPLE

- No GEC needed for microinverter
- No DC design or string calculation required
- Easy installation with Engage Cable

RELIABLE

- 4th-generation product
- More than 1 million hours of testing and 3 million units shipped
- Industry-leading warranty, up to 25 years

INPUT DATA (DC)		M250-60-2LL-S22/S23/S24	
Recommended input power (STC)	210 - 300 W		
Maximum input DC voltage	48 V		
Peak power tracking voltage	27 V - 39 V		
Operating range	16 V - 48 V		
Min/Max start voltage	22 V / 48 V		
Max DC short circuit current	15 A		
Max input current	9.8 A		
OUTPUT DATA (AC)		@208 VAC	@240 VAC
Peak output power	250 W	250 W	
Rated (continuous) output power	240 W	240 W	
Nominal output current	1.15 A (A rms at nominal duration)	1.0 A (A rms at nominal duration)	
Nominal voltage/range	208 V / 183-229 V	240 V / 211-264 V	
Nominal frequency/range	60.0 / 57-61 Hz	60.0 / 57-61 Hz	
Extended frequency range*	57-62.5 Hz	57-62.5 Hz	
Power factor	>0.95	>0.95	
Maximum units per 20 A branch circuit	24 (three phase)	16 (single phase)	
Maximum output fault current	850 mA rms for 6 cycles	850 mA rms for 6 cycles	
EFFICIENCY			
CEC weighted efficiency, 240 VAC	96.5%		
CEC weighted efficiency, 208 VAC	96.0%		
Peak inverter efficiency	96.5%		
Static MPPT efficiency (weighted, reference EN50530)	99.4 %		
Night time power consumption	65 mW max		
MECHANICAL DATA			
Ambient temperature range	-40°C to +65°C		
Operating temperature range (internal)	-40°C to +85°C		
Dimensions (WxHxD)	171 mm x 173 mm x 30 mm (without mounting bracket)		
Weight	2.0 kg		
Cooling	Natural convection - No fans		
Enclosure environmental rating	Outdoor - NEMA 6		
FEATURES			
Compatibility	Compatible with 60-cell PV modules.		
Communication	Power line		
Integrated ground	The DC circuit meets the requirements for ungrounded PV arrays in NEC 690.35. Equipment ground is provided in the Engage Cable. No additional GEC or ground is required.		
Monitoring	Free lifetime monitoring via Enlighten software		
Compliance	UL1741/IEEE1547, FCC Part 15 Class B, CAN/CSA-C22.2 NO. 0-M91, 0.4-04, and 107.1-01		

* Frequency ranges can be extended beyond nominal if required by the utility

To learn more about Enphase Microinverter technology,
visit enphase.com



Enphase Energy M250 Microinverter 10-Year Limited Warranty - Australia & New Zealand

Important note: This warranty is additional to your statutory rights

This Enphase Limited Warranty applies in addition to the guarantees, rights and remedies conferred by the consumer laws in your jurisdiction. The Enphase Limited Warranty does not exclude, affect or limit those guarantees, rights or remedies except to the extent that their application may lawfully be excluded or limited.

The following paragraph relates to goods supplied in Australia only:

Our goods come with guarantees that cannot be excluded under the *Australian Consumer Law*. You are entitled to a replacement or refund for a major failure and compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

You may also be able to seek a remedy from us in relation to consumer guarantees for goods supplied in New Zealand.

Enphase Energy Inc. ("Enphase") has developed a highly reliable microinverter, designated as the M250 Series ("Microinverter"), that is designed to withstand normal operating conditions when used for its originally intended purpose in compliance with the Enphase User Manual made available with the originally shipped system. The Enphase limited warranty ("Limited Warranty") covers defects in workmanship and materials of the Enphase Microinverter ("Defective Product") for a period of ten (10) years from the date of original purchase of such Microinverter at point of sale to the system owner (the "Warranty Holder") the originally-installed end user location (the "Warranty Period") in Australia or New Zealand.

During the Warranty Period, the Limited Warranty is transferable to a different owner ("Transferee") as long as the Microinverter remains installed at the originally-installed end user location ("Original Location") and the Transferee submits to Enphase a "Change of PV Ownership Form" and applicable Transfer Fee within 30 days from the date of transfer to the Transferee. This submission is a requirement for continued Limited Warranty coverage. The Transfer Fee is set forth in the Change of PV Ownership Form, and is subject to reasonable adjustment from time to time (as determined at Enphase's discretion). The Change of PV Ownership Form and payment instructions are available at <http://www.enphase.com/warranty>. Enphase reserves the right to provide separate warranties that shall govern with respect to Microinverters installed in specific regions as set forth on our website at <http://www.enphase.com/warranty>.

During the Warranty Period, if Enphase establishes, through inspection, the existence of a defect that is covered by the Limited Warranty, Enphase will at its option, and subject to the terms, exclusions and limitations set out in this warranty, either (1) repair or replace the Defective Product free of charge, or (2) issue a credit or refund for the Defective Product to the Warranty Holder of the system in an amount up to its actual value at the time the Warranty Holder notifies Enphase of the defect, as determined by Enphase.

If Enphase elects to repair or replace the Defective Product, Enphase will, at its option, use new and/or reconditioned parts in repairing or replacing the Defective Product. Enphase reserves the right to use parts or products of original or improved design in the repair or replacement of Defective Product. If Enphase repairs or replaces a Defective Product, the Limited Warranty continues on the repaired or

replacement product for the remainder of the original Warranty Period or ninety (90) days from the date of Enphase's return shipment of the repaired or replacement product, whichever is later. The Limited Warranty covers both parts and labor necessary to repair the Defective Product (if Enphase elects to repair the Defective Product), but does not include labor costs related to (1) un-installing the Defective Product or (2) if applicable, re-installing a repaired or replacement product. To the extent applicable, the Limited Warranty also covers the costs of shipping a repaired or replacement product from Enphase, via a non-expedited freight carrier selected by Enphase, to locations within Australia or New Zealand. The Limited Warranty does not cover, and Enphase will not be responsible for, shipping damage or damage caused by mishandling by the freight carrier and any such damage is the responsibility of the freight carrier.

To obtain repair or replacement service, credit or refund (as applicable) under this Limited Warranty, the Warranty Holder must comply with the following policy and procedure:

- All Defective Product must be returned to Enphase with a Return Merchandise Authorization Number (RMA) which Warranty Holder must request from Enphase. Before requesting the RMA, however, the Warranty Holder must contact an Enphase technical support representative to evaluate and troubleshoot the problem while the Enphase Microinverter is in the field, since many problems can be solved in the field.
- If in-field troubleshooting does not solve the problem, Warranty Holder may request the RMA number, which request must include the following information:
 - Proof-of-purchase of the Defective Product in the form of (1) the dated purchase receipt from the original purchase of the product at point of sale to the end user, or (2) the dated dealer invoice or purchase receipt showing original equipment manufacturer (OEM) status, or (3) the dated invoice or purchase receipt showing the product exchanged under warranty
 - Model number of the Defective Product.
 - Serial number of the Defective Product.
 - Detailed description of the defect.
 - Shipping address for return of the repaired or replacement product (as applicable).
- If in-field troubleshooting of the Enphase Microinverter is not able to be accomplished because the Envoy device does not exist or is not operational, and the unit is determined upon receipt and testing by Enphase personnel as being fully operational (no trouble found) the Warranty Holder will incur a AUD \$200 handling fee.
- All Defective Product authorized for return must be returned in the original shipping container or other packaging that is equally protective of the product.
- The Warranty Holder bears all expenses associated with initial claims under this Limited Warranty. However, Enphase will reimburse the Warranty Holder for postage costs incurred in the event that the Warranty Holder has made a valid claim under this warranty and posts the product to Enphase. Please retain proof of postage expenses incurred in order for such costs to be reimbursed.
- The returned Defective Product must not have been disassembled or modified without the prior written authorization of Enphase.

Enphase Microinverters are designed to withstand normal operating conditions and typical wear and tear when used for their original intent and in compliance with the installation and operating instructions supplied with the original equipment. The Limited Warranty does not apply to, and Enphase will not be responsible for, any defect in or damage to any Enphase Microinverter: (1) that has been misused, neglected, tampered with, altered, or otherwise damaged, either internally or externally; (2) that has been improperly installed, operated, handled or used, including use under conditions for which the product was not designed, use in an unsuitable environment, or use in a manner contrary to the Enphase User Manual

or applicable laws or regulations; (3) that has been subjected to fire, water, generalized corrosion, biological infestations, acts of God, or input voltage that creates operating conditions beyond the maximum or minimum limits listed in the Enphase Microinverter specifications, including high input voltage from generators or lightning strikes; (4) that has been subjected to incidental or consequential damage caused by defects of other components of the solar system; or (5) if the original identification markings (including trademark or serial number) of such Microinverter have been defaced, altered, or removed. This Limited Warranty does not cover cosmetic, technical or design defects, or shortcomings which do not materially influence or affect the energy production or degrade form, fit, or function of the Enphase Microinverter. The Limited Warranty does not cover costs related to the removal, installation or troubleshooting of the Warranty Holder's electrical systems. The Limited Warranty does not extend beyond the original cost of the Enphase Microinverter. To the extent permissible under the Australian Consumer Law, Enphase expressly reserves the right to novate or assign its rights and obligations under this warranty agreement to a third party with the demonstrated expertise and requisite resources needed to effectively discharge the obligations hereunder.

TO THE EXTENT PERMITTED BY LAW ENPHASE WILL NOT BE LIABLE FOR ANY SPECIAL, DIRECT, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES, LOSSES, COSTS OR EXPENSES HOWEVER ARISING, WHETHER IN CONTRACT OR TORT, INCLUDING WITHOUT LIMITATION ANY ECONOMIC LOSSES OF ANY KIND, ANY LOSS OR DAMAGE TO PROPERTY, OR ANY PERSONAL INJURY.

This warranty is offered by Enphase Energy, Inc.

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Petaluma, CA 94954
(707) 763-7000
support@enphaseenergy.com

For in country support in Australia or New Zealand please contact Enphase Customer Support at <http://enphase.com/global/au/> or by telephone at (03) 8669-1663.

The grant of this Limited Warranty by Enphase is conditioned upon agreement by the Warranty Holder and any permitted Transferee to the terms, conditions and requirements herein.